

CLAIMS

What is claimed is:

- 5 1. A consumable guide tube, comprising:
 a first elongated strip and a second elongated strip wherein each of said strips have a front face and a back face;
 at least one longitudinal channel defined on said front face of said first elongated strip;
 said front face of said first elongated strip joined to said front face of said second elongated strip;
 said at least one longitudinal channel positioned to receive at least one welding wire; and
 a plurality of insulator modules coupled to said back face of said first elongated strip and said back face of said second elongated strip.
- 10 2. The guide tube of claim 1 wherein said guide tube is oscillated in an electroslag welding process.
- 15 3. The guide tube of claim 1 wherein said first elongated strip comprises two or more longitudinal channels.

4. The guide tube of claim 1 wherein said first elongated strip is joined to said second elongated strip by welding said first elongated strip with said second elongated strip.
- 5 5. The guide tube of claim 1 wherein said at least one longitudinal channel is defined by a circular shape.
6. The guide tube of claim 1 wherein said at least one longitudinal channel is defined by a triangular shape.
7. The guide tube of claim 1 wherein said first elongated strip is thinner than said second elongated strip.
8. The guide tube of claim 7 wherein said insulator modules are coupled to said first elongated strip and said second elongated strip at intervals.
9. A consumable guide tube used in an electroslag process, said consumable guide tube configured to guide at least one welding wire into a welding cavity and transmits amperage to said at least one welding wire, comprising:
20 a first elongated strip and a second elongated strip where said first elongated strip and said second elongated strip each has a front face and a back face;

at least one longitudinal channels defined on said front face of said first elongated strip configured to receive at least one welding wire;
said front face of said first elongated strip joined to said front face of said second elongated strip; and
5 a plurality of insulator modules coupled to said first elongated strip and said second elongated strip.

10. The guide tube of claim 9 wherein said first elongated strip is thinner than said second elongated strip.
11. The guide tube of claim 10 having two or more longitudinal channels defined on said first elongated strip.
12. The guide tube of claim 11 having a plurality of insulator modules disposed in intervals of 4 to 6 inches.
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13. A consumable guide tube, comprising:
a thin first elongated strip having a front face and a back face, said front face having at least one longitudinal channel;
20 a second elongated strip having a front face and a back face, said front face of said second elongated strip configured to be coupled to said front face of said thin first elongated strip;

a plurality of insulator modules deposited on the back face of said thin first elongated strip and on said back face of said second elongated strip.

14. The guide tube of claim 13, wherein said thin first elongated strip is a low carbon
5 cold rolled steel strip.

15. The guide tube of claim 13, wherein said second elongated strip is a low carbon hot rolled steel strip.

10 16. The guide tube of claim 13, wherein said front face of said thin first elongated strip comprises two or more longitudinal channels.

17. The guide tube of claim 13 comprising a rust resistant coating deposited on said guide tube.

18. The guide tube of claim 13 wherein said plurality of insulator modules is composed of a flux material used as flux during an electroslag process.
19. The guide tube of claim 13 wherein said thin first elongated strip is coupled to said
20 second elongated strip.

20. The guide tube of claim 13 wherein the thickness of the combination of said thin first elongated strip, said second elongated strip, and said plurality of insulator modules is less than 0.75 inches.